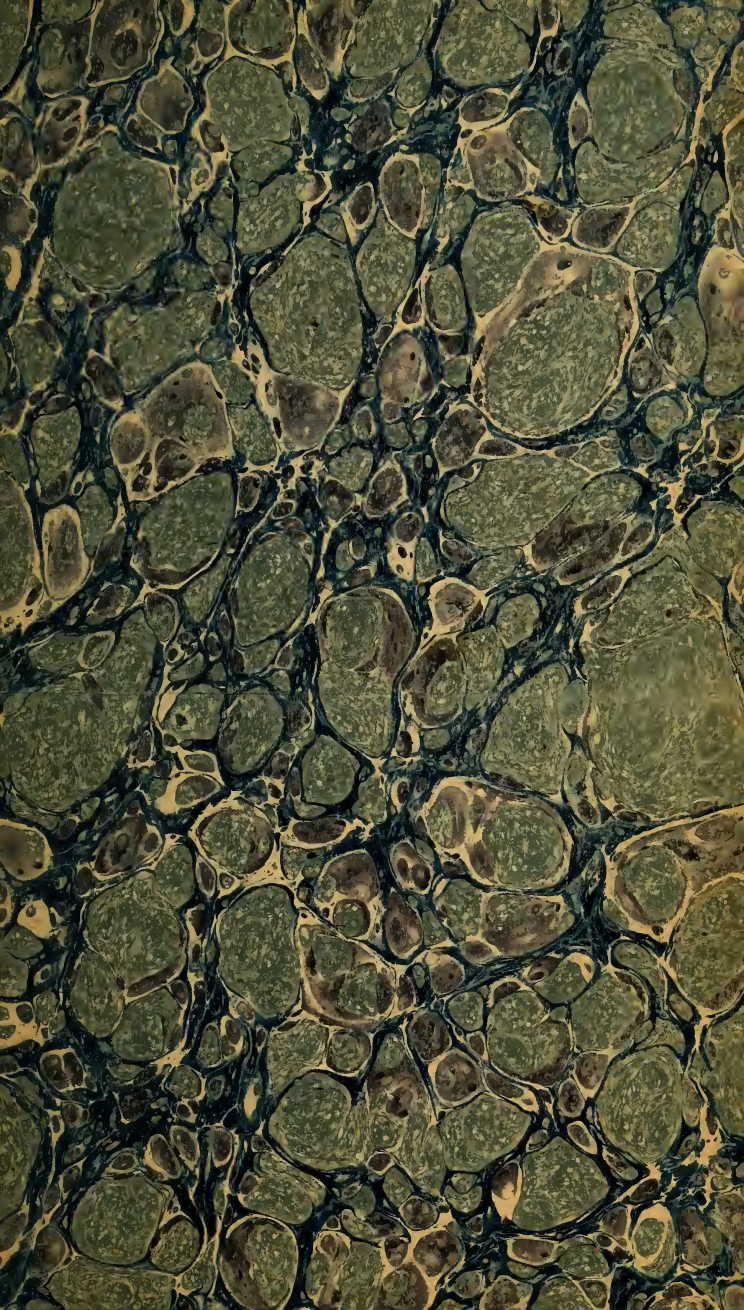
DENTAL HYGEIA

A POEM.



Sarah F. Marsh.

Thank E. Bundy Mrs.

DENTAL HYGEIA,

A POEM,

ON THE HEALTH AND PRESERVATION

OF THE

TEETH.

BY SOLYMAN BROWN, A. M.
AUTHOR OF DENTOLOGIA, &C.

NEW-YORK:
PUBLISHED FOR THE PROPRIETORS.
KELLEY & FRAETAS,
Printers, 70 Bowery.
::::::::::
1838.

10187

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J. Frederick Myers

DEDICATION.

TO AUGUSTUS WOODRUFF BROWN.

If the tie of consanguinity were not of itself a sufficient motive for dedicating the following Poem to a brother, the circumstance that you have selected Dentistry as your profession, and acquired your preparatory education under the superintendance of the author of this little volume, might be my apology. For many years, even from that melancholy hour when the best of mothers left you an infant wholly unconscious of your loss, and passed the celestial metamorphosis which truth and virtue always undergo in rising from earth to heaven, have I watched your steps along the path of life with fraternal solicitude. Nor has my anxiety for your welfare been repaid with disappointment. I see you now advanced to years of manhood, and as I fondly believe, uncontaminated by those unfortunate traits of disposition and habitudes of character, by which too many youths of our country are plunged in moral degradation and precipitated to early graves. I see you also, active, skilful, persevering, ardent with enterprize and flushed with success in your favorite pursuit, promising to become extensively

useful to your fellow men. Under these circumstances, what can I say to you, but, "Go on and prosper." The sphere of usefulness in our profession is co-extensive with the human family. Not an individual in society can expect to pass through life, if that life be of any considerable duration, without requiring the professional aid of the dental practitioner in some department of his art. The rich, the wise, the learned, the good, are by no means exempt from this necessity; while the careless, the luxurious and the vicious, are perpetually exposed to dental disease. You feel as I do, that while mediocrity in our profession is very easily attained, excellence and emminence are the rewards of industry and genius. To be a tolerable dental operator, merely avoiding the reproach of downright stupidity, is not, I am well apprized, the extent of your professional ambition. Your motto is, as it should be, "*aut Cæsar aut nihil*" to be foremost among the first in your profession, or to abandon it to those who have the noble ambition of prefering to be *first* in the smallest village of the Roman Empire, rather than *second* in Rome itself. You will not understand me as encouraging an exalted ambition for its own sake, as that would be selfishness: but for the sake of extensive usefulnes, as this benevolence. Self-love in all its forms, should indeed be repressed rather than stimulated; but it is not an expression of selfish desire to fix an elevated standard of useful activity, during the

brief period of mortal life, in preparation for entering upon the purer charities of "the better land."

I could refer you to many examples of highly honorable men, who of late years have contributed the influence of their characters, and the impulse of their genius to the advancement of genuine dental science, in opposition to the quackery of ignorance, and the *crawcourism* of presumption. It will be sufficient for my present purpose, to allege the conspicuous example of the Messrs. Parmly, of Park Place, whose skill and integrity have contributed in no trifling measure to procure for our art "a habitation and a name" in the best circles of American Society. Let their example be kept steadily in view in all your efforts for professional advancement. Remember the amiable manners, the fixed integrity, the stern sobriety, the steady economy, the rare generosity, the industry unwearied, by which those gentlemen have been so long distinguished — and you will never wonder at their eminent success.

Imitate their example — and you will not fail of sharing their prosperity.

SOLYMAN BROWN.

New-York, May, 1838.
571 BROADWAY,
Opposite Niblo's Garden.

ARGUMENT

TO THE

FIRST CANTO.

Dearness of the maternal Relationship.—Its blessedness.—Its watchfulness and care.—The mother's devotedness to her children. — Pains to accomplish and adorn them. — Importance of health.—Of exercise.—Of food.— Of grains, vegetables, and fruits.— Drink. — Bathing. — Clothing. — Medicine, and the Physician.— Teeth, and the Dentist.

FIRST CANTO.

ADDRESSED TO MOTHERS.

If man, the master-work of Him who built
The universe, with all its rolling spheres,
And burning constellations,—has in life
One fond idea graven on the heart;
One darling recollection in the hour
Of joy or sorrow, to enhance his bliss,
Or sanctify his grief; one sacred word,
The names of God excepted, more than aught
In human language holy, sweet and pure,
It is the name of MOTHER! When a child,
I lisp'd it in the cradle, till the tear
Of laughing gladness trickled down my cheek,
And my young hands clapp'd joyfully, to find
A thing on earth so holy. When a man,
Just 'merging to the trials of the world,
From truant boyhood, on a winter's day,
When nature wore her winding-sheet of snow,
And all seemed dead around me and within,
I breathed that name beside a mother's grave.
And now, that many a summer flower has deck'd
The hallowed spot, as circling years have roll'd,
And she who bore the sacred title, grown
To high estate in heaven,—I hear the name
Repeated daily by my blooming boy!

Ye mothers!—Ye are doubly bless'd on earth,
And shall be doubly honor'd in the skies,
If well ye do your duty: for, in one,
If true maternal piety be yours,
Ye blend the names of mother and of wife.
Endearing appellations!—Bless'd estates!—
Such as the Angels love to smile upon!

Your cares I know, are great and multiplied,
But yet endearing, and therefore endeared.
From morn till eve—from eve again till morn,
Your life is watchfulness and deep anxiety.
The noisy world with all its recklessness,
Comes not within the precincts of your homes
To dissipate attention:—nor the pomp
And pageantry of life can win your hearts
From whom ye love, your children and their sires,
Not even if base ingratitude is theirs!

Think not I come, then, with the muse's fire
To animate your love—for that burns bright
On the domestic altar:—nor believe
The poet so can underrate your love
As think ye need aught other stimulus
Than truth to lead to duty. I believe
As firmly as I do all sound philosophy,
More firmly than I can all christen'd such,
That mothers are as prompt to seek the good
Of their own offspring, and to cherish it,
As is the Sun to shine upon the world
When every cloud is swept away from heaven.

Mothers! I know the tenderness ye feel
For the dear pledges of connubial love,
From ample observation—not to speak

Of volumes learn'd from her who was n y own,
And her who is the Mother of my child.
And well I know how many are your cares
For these your offspring. Under Him above
Ye act as their protectors, and supply
Their numerous wants of food and raiment, all
Recurring daily ; and to you is left
The education of the deathless mind
From darkness up to immortality.
In sickness too, they look to you for help
Against the fell destroyer ;—and if Death
Nip the young bud ere yet it come to blossom,
How fondly ye embalm it with your tears!
Ye will not, then, believe it disrespect
Which prompts the precepts of my humble muse.
Say—I am vain to fancy I can teach
Those who already know so well their duty :—
Say—I aspire to more than mortal fame
To tell maternal love what heaven requires :—
But charge me not of even thinking lightly
Of aught connected with the name of Mother!
Your children have your care. If means permit,
They shine in purple, crimson, blue and gold,
Bright as the butterfly upon the wing
In genial summer day :—and on their heads
Gemm'd with the pearl and crysolite, they wear
The plumage of the birds of paradise.
The silk-worm's palace and the ermine's vest
Protect them from the rudeness of the wind.
To nourish them and gratify their tastes
Ye bring them dainties from remotest climes.
At morning, noon and eve, from day to day,

Rich viands crown the board and richer fruits,
Spices and gums and aromatic sweets,
From every climate of the varied world.
Ye make them all-accomplished in the dance,
Whether the plain cotillion, or quadrille,
Or vulgar waltz. Ye give them music too,
The viol and the flute, and the guitar,
The sweet piano and the cheerful harp.
All this, or most of it, I will not blame;
Much less the nobler culture of the mind.
Those sciences by which our favor'd age
Has left "all Greek, all Roman fame" behind,
And sage Egyptian; and those noble arts
Which not the builders of the Pyramids,
Nor architects of haughty Babylon,
Could comprehend,—are worthy our pursuit.
They dignify the soul that studies them,
And lift it upward to its native skies.
My unambitious muse will not condemn
Aught ye have done to make your children happy,
And give them fame and fortune in the world.
She comes to speak of what ye may neglect,
The "Healthy mind within a healthy body."
This, by an ancient sage was deemed the sum
Of earthly good; the best the Gods could give
Or take away; the all of human bliss.
But while I give full credit for the thought
In its laconic beauty, its wide sense
Must be disclosed and seen, to give it all
The credence which its author might desire.
And yet it has much truth on its bare face.
"A healthy mind within a healthy frame,"

Should be a ruling exiom of the schools
And the first doctrine of the nursery.
Of mental culture and of moral rules
I shall not now discourse :—for these belong
To other themes than those my muse inspires.
She bids me sing of that corporeal health
Which acts by sympathy upon the soul.
And here the muse might linger in her song
Through many a page instructive :—she might tell
Of exercise in open field and air,
Or on the sea ; of many a youthful sport
And game attractive, full of healthy action,
That gives athletic vigour to the blood.
But themes like these demand a father's thought,
While on the mother other cares devolve.
And first, of food or various aliment
Solid and fluid, shall the muse discourse.
All life beneath the sun must needs subsist
By nourishment—and Heaven's high bounty feeds
The animal and vegetable worlds.
The herbs, and trees, and flowers, imbibe their food
By the fixed laws of blind necessity,
And never can go wrong. Instinct alone
Directs beast, bird and insect to their meals,
And rarely therefore do they go astray.
But man is left to reason ; and is free
To feed his blood with healthy nutriment,
Or send corrosive poison through his veins.
He has the world before him where to range,
Whether by sea or land, in fire or air,
To feed the cravings of his appetite.
He digs the mine for poisons ; fabricates

Pernicious drugs from nature's fairest fruits; ([1])
Dives to the peopled caverns of the sea
In search of luxuries:—and from the air
Tortured in his alembick, he extracts
The deadliest foe to every form of life. ([2])
Then tell me, mothers! can ye wisely doubt
That heaven intrusts to you the careful choice
Of healthy aliment for those ye love
Better than life, the helpless little ones
Whose reason yet is in its embryo?
Choose then with sound discretion, and inquire
Of sage experience and philosopy.
Seek not for fierce and fiery stimulants
That mix galvanic lightning with the blood;
Nor base narcoticks, only fit to lull
The lazy Turk upon his ottoman:—
But seek true nourishment—delicious bread
In all its varied forms from white to brown.
Wheat, rye and maize, the Indian's golden grain,
And barley better used for infant's pap
Than tortured by the serpent of the still,
Or fermentation of the brewery;
And e'n the oat, that much neglected grain,
Which yet the prudent Scot knows how to use.
And draws from it delicious nourishment;
These are for bread. Milk from the brimming pail
Which some fair dairy maid with music brings
Sweet to the polish'd pans; and butter too
Fresh moulded in a mass of burnish'd gold;
And cheese, with eggs cooked slightly, now and then,
May give keen relish to your children's fare.
Next from the garden cull delicious store

Of wholesome nutriment. Asparagus
The earliest pledge of spring, and peas delicious;
The solid bean which made the Romans strong,
And gave its classic name to Fabius;—
These, with the roots and herbs that summer brings,
Unnumber'd as its flowers, the mother's hand
Distributes freely to her household throng.
Then to the field repair. The polish'd plough
Has mellowed up the soil, and fitted it
For that abundant root, the rich return
Our country gave to Europe and the world,
For all their gifts of science and the arts—
The esculent potato!—Gather it
In heaping measure for your daily use.
Whether the summer's sun is high in heaven,
Or snows of winter wrap the freezing world,
Your frugal meal should seldom be despatch'd
Without this precious root. Its magic power
Has formed a garden from a wilderness
Through half the confines of our native land.
For well we know, without its potent aid
The woodman's axe would never yet have rung
In half the western world, where now are seen
Cities, and villages, and fruitful fields.
Go to the orchard. There the apple hangs
With scarlet blushes on its polish'd cheek.
The peach is there cradled in down; the grape
Curling its tendrils round the purple fruit
Pendant in clusters; and the acid plum
Melting beneath the kisses of the sun.
All these are good for food:—And in the field,
The strawberry that blends so lusciously

With sugar'd cream: the whortleberry too,
And raspberry, with others yet unnam'd
In poet's song:—these offer to thy choice,
And every circling season brings them all.
Nor does the tangled forest quite forbid
Thy hopeful search. The blackberry is there,
And the wild grape; the apple of the sweet
And flowery honeysuckle, and the food
That gives the noisy squirrel bounding health—
Walnuts and chesnuts, beech and hazle-nuts.
All these may mingle in your annual hoard
And make the young ones laugh, with no effect
Injurious, should you not habitual blend
The fulsome fatness of the slaughter house.
Then, give your children vegetable food,
And ripened fruits proportioned. Give them these
And cast the butcher's carvings to the dogs.
Of drinks, I know but one which nature owns
As wholly suited to her several wants;—
And this is WATER. Cool and unconcoct
With heat or other mixture, I would give
It fresh and sparkling from its crystal fount
To quench the thirst of every thing that lives. (3)
Ask the physician who has studied long
The healing art, and knows his science well,
What fluid 'tis that liquifies the blood,
That courses the lymphaticks and the glands,
The lacteals, the arteries and veins,
To bear the various solids to their use,
And circulate the vital heat throughout
The mortal frame:—and should he answer you
As well he may—nay must—that water pure

With vital heat combined, perform the work
Of universal solvent in the blood,
Ye must admit the tear drops of the clouds
The alimentive fluid best for man.
All other forms of liquid aliment,
So called absurdly, can be good for man
No further than the water they contain.
Why mix it then with drugs of foreign growth,
Coffee and tea, and other stimulants?
Why roam the world for base ingredients
To mix with that which God has made so good;
Unless to give the stomach harder toil
And labor of digestion:—or unless
To plant the germs of malady and death? (4)
And water, too, the great detergent, bears
Another form of use of vast account
In all our schemes of health and happiness.
The frequent bath, or every-day lavation,
Justly demands a mother's constant care.
To show the cause were tedious, and the muse
Prefers advice to argument. But colds,
And raging fevers, and acute disease
In various forms, spring from the long neglect
Of cool ablution. Let it then be done
Daily, and semi-daily if required.
The infant first, and then the child, becomes
Fond of the habit which, if firmly fixed,
Contributes greatly to longevity. (5)
Of clothing 'tis sufficient to advise
Never to dress too much—that is, too warmly.
A cumbrous load of garments but impedes
The quick and graceful action of the limbs

And renders awkward, what were else genteel:
And more, it cramps the vital functions; stays
The current of the blood; confines and checks
The natural exhalations from the skin,
And thus deranges all the powers of life.
When winter ushers in his frozen reign
Of snows, and icicles, and drifting storms,
Give to your children garments neat and warm,
As does kind nature to her forest tribes
That dwell beneath the poles. In summer too,
Consult the same instructress; nature then
Removes from her dumb children part at least
Of their superfluous dress. The fowls then moult
Their cumbrous feathers, and the furry tribes
Shake off their shaggy covering to the winds. (6)
Of medicine I fain would hope the use
Will rarely find necessity with you
Or yours, who practice thus the rules of health.
But when ye err from ignorance of facts
Or from neglect of all the truth ye know,
And sickness comes, then choose a good physician;
A man of liberal mind, by science taught
To scorn the petty arts of quackery
So rife in every land where there are fools
To gape and wonder at the charlatan?
Select a man who would not jeopardize
His patient's life in mad experiments,
Nor give the twenty-millionth of a grain
To check a fever; one who would not stoop
To base detraction from another's fame,
Who chanced to exercise the same pursuit; (7)
A man of honor and of honesty,

For such there always are, and many too,
Who sooner far would suffer obloquy
Than kill a patient to conceal a fault.
When ye have chosen him, and found him such
As modern science justly may demand,
A man of warm and tried humanity,
Whose glory 'tis "to heal and not to kill,"
Give him your confidence; and should his skill
Be baffled by the fierceness of disease,
Resign the offspring of your guardian love
To the unerring will of righteous Heaven.
The muse has chanted thus her minstrel lay
Through devious paths in search of rosy health,
Which brings her to the burthen of her song.
In all our estimates of antidotes
To fell disease in every hateful form,
The sound condition of the *dental arch* (8)
Stands prominent. The teeth so highly priz'd
In nature's schemes of growth and nutriment,
Are *twice produced* in mercy to our race,
To give protection and stability
To those essential organs:—and the food
Ere deglution hurries it along
To the digestive powers, must be prepared
By mastication for its final use.
And they are more. The beauty of the face,
The part we wish mankind to know us by,
Where speak the moving passions of the soul,
Is quite disfigured if the teeth be bad.
But when in shining ranks of polish'd pearls
Untarnished by disease, they lend a grace
E'en to the plainest features, which not all

The jewels of the Indies could impart.
Besides, they greatly modify the speech,
One of the noblest attributes of man;
And give to vocal music half its charm.
Be counselled, then, ye mothers! by the muse,
To give attention, such as love requires,
To this department of maternal duty.
Observe your children's teeth as they advance,
Lest mal-position set them all awry.
Let cleanliness, the pledge of general health,
Be scrupulously cherish'd in the mouth;
And when corrosive tartar and gangrene
Assail the teeth, then summon to your aid
The skilful dentist—one, whose liberal mind
Has traced the streams of science to their source;
Who knows his duty both in theory
And patient practice; and whom golden gain
Could never tempt to acts of quackery.
Then shall your children bless you, and their years
Of healthful vigor usefully employed
Shall swell the glory of their native land.

END OF FIRST CANTO.

SECOND CANTO.

ARGUMENT

TO THE

SECOND CANTO.

Invocation to the fair. — Subject proposed. — Health and beauty. — Important trio, dress, diet and exercise. — The country. — The city. — Disease. — The teeth, attention they require. — Gangrene and tartar. — Colombrosia — Philosophine. — Melisabel.—Claroma.

SECOND CANTO.

ADDRESSED TO YOUNG LADIES.

If, when the minstrel consecrates his lay
To *one* fair daughter of the race of Eve,
His bosom glows with rapture; how can I
Conceal the transport of the modest muse
When she addresses *thousands?* Let her then
Receive sweet approbation clad in smiles
That play on lips of coral, while she sings
Of living beauty, mantling to the cheek
In all the freshness of the vernal rose.

Then come, ye blooming fair, a smiling band!
And be the charming subject of my song,
And all its inspiration:—while I tell
Of things unsung before in blank or rhyme:—
How health and beauty, with a flowery throng
Of sister charms and graces, wait on all
Who wisely use the means which Heaven provides
To make them lovely; and how pale disease
And vile deformity with all their train
Of imps uncouth, are but the progeny

Of ignorance and folly—hateful fiends!
Who violate the sacred laws of life.
To give full vigour to the female form,
And beauty to the face of lovely woman,
A thousand various causes must conspire.
Dress, diet, exercise, in all their forms,
Compose a trio of contingencies
Which whosoe'er neglects or misapplies,
Will vainly seek relief in self-reproach
Or reformation, when delayed too long.
Youth is the season when the germ of health
Planted in childhood, must be fondly cherished,
Or other years will find no ripen'd fruits.
Let, then, your dress be plain, or when adorned,
Adorned with chaste and sweet simplicity,
So that the gazer shall not more admire
The ornamented casket than the gem.
Capricious fashion leave for fools to follow,
And thus shall fashion learn to follow you.
For if she lead, and ye, her votaries,
Submit to her dictation, can ye know
Through all the mazes of her foolery,
That nothing will restrain, suppress, pervert
The native action of your fairy forms?
Has every limb its motion unrestrained;
Each muscle too its full activity?
Does the warm blood flow freely through the veins,
And do the lungs inhale the vital air
Without undue compression and restraint?
The heart itself—that flowing fount of life,
Does that beat unconfined, or does the rage
For innovation upon nature's laws,

Truss up the body in an acorn shell,
The bloodless victim of an early grave?
In dressing plainly, learn to dress with taste
In forms and colours; while the quantity
Suits to the season, let the quality
Comport with that condition in the world
Which righteous Heaven allots; for when the poor
Struggle to ape the rich, and when the rich
Have greater pride in show than charity,
The social system totters to its fall.
Of diet, it becomes the prudent muse
Not to advise too much; for well she knows
Mankind will eat and drink for fashion's sake,
In spite of what philosophy can say,
All forms of matter that may be in vogue,
Whether alive or dead, flesh, fish, or fowl;
Solid or fluid poison, from the earth
Or sea, or fire, or air;—and oftentimes
For lack of daintier viands, eat each other.
I will not then so squander good advice,
And waste fair words, as specify the kinds
Of meats and drinks that wisdom should reject,
Nor those that long experience would approve.
But rather will I urge sobriety
And moderation in the thankful use
Of nature's bounty. Let your daily meals
Be regular in time, and so removed,
One from the other, that digestion may
Perform its perfect work; and seldom eat
Or drink between, unless delicious fruit
Well ripen'd by the fertilizing sun,
Shall tempt your taste. Of this eat freely, nor

Forget to feel due thankfulness to Him
Who gives you all the bounties of the year.
Hot drinks avoid, and highly seasoned meats,
Nor be ye unapprized, that, could your taste
Be formed so simply as to slake your thirst
With cool, refreshing water from the spring,
And satisfy your hunger on the fruits
Which summer brings, with vegetable food,
Without the bleeding sacrifice of life,
A thousand ills would vanish into air
And laughing health re-animate the world.
In cities where the forms of social life
Require seclusion in the softer sex,
And sedentary cares, the active sports
And healthy exercise the country yields
Are all unknown. The invigorating breeze
That comes from fields of fragrance, and the songs
Of forest birds, and bubbling rivulets,
The bee's soft murmur, and the insect's hum
In grove and garden bower, invite your steps
To court refreshment in the rural scene.
There mount the well-trained steed whose careful step
Shall bear you gallantly o'er hill and dale,
And through the swelling stream profusely fed
By mountain rivulet and vernal shower.
Or under cover of the twilight gray,
At dewy eve, with many a laughing fair,
Walk fearless to the shining river's brink
And plunge exulting in the cooling wave.
Or better still, if on the ocean shore,
Among the graceful Naiads of the deep,
Ye struggle with the tides, and court high health

In playful contest with the foaming surge.
The garden, too, invites your morning walk
Among the flowers; and should your gentle hands
Dispense in time the artificial shower,
How richly will they pay you in perfume!
Perchance the daised meadow may invite
Your willing steps, to cull the strawberry:
The cherry pendant from the burthen'd bough
May stoop to steal the kisses from your lips;
Or, by the hedge, the raspberry may tempt
Your lily fingers reddened like the rose.
With friends select, on some fair autumn day,
Repair to yonder mountain—Holyoke—
That looks on Massachusett's verdant vales;
The Catskill, whence the mighty Hudson seems
A vein of silver on the plain below;
Or Peak of Otter, the Virginian's boast,
Bathing its rocky summit in the clouds;
Or that whose towering height and snowy brow,
Give it the immortal name of Washington,
Gazing from heaven upon the admiring world!
There stand awhile in contemplation rapt,
And silent wonder. See the subject earth,
Spread out before you like the schoolboy's map,
And hills and dales, forests and rivers lost
In bright confusion in the scene below.
On themes like these the muse would gladly dwell
For many an hour discursive; but she fears
To weary her fair readers; and returns
Reluctant to the city's noisy din.
Here, pent by massive walls of brick and stone,
From Heaven's pure gales, and earth's gay scenery,

Where shall we look for active exercise
To please the fair? At times th' Elysian Fields
Of Hoboken, delight them for an hour;
And oft the Battery, at blush of dawn,
Or dewy evening mild beneath the moon,
Fann'd by refreshing breezes from the sea,
Invites young lovers to its balmy shades:—
But fam'd Broadway must be their chief resort
For healthy action where, for vain display,
The whiskered dandy struts his idle hour.
But fear him not, ye unpretending fair!
Nor court his admiration; for the muse
Has well observed him from Parnassus' height,
And finds him but the shadow of a man!
Go, then, ye fair inspirers of my song!
And seek brown exercise and ruddy health
Wherever found allied to innocence:—
For what is woman, else so heavenly sweet,
Unus'd to all exertion but to sigh,
And pale and bloodless as a skeleton?
Give every limb its action. Let the lungs
Frequent inhale the breezy breath of heaven,
And while the crimson flood swells high the veins
The damask rose shall blossom on your cheeks.
But when the laws of health have been annul'd
By long transgression, and disease invades
Your youthful frames, it is not mine to give
Advice professional, unless the teeth,
As happens frequently, are first to suffer.
If this occur, the fault may be your own
Through lack of cleanliness. The teeth require
Much more attention than mankind suppose.

The tidy housewife never uses *twice*
Her knives, and plates, and spoons without ablution,
But well she purifies and cleanses them
Before she deems them fit for use again.
The teeth are more expos'd than knives and spoons
To foul accretions, and deserve like them
Most careful cleansing after every meal.
And when we wake at morn they need it too,
For while we sleep, the salivary glands
Deposite tartar which must be removed,
Or fatal consequences supervene.

At times, the dental arch may be assailed
By dark gangrene, and crumble to decay
Without your fault or negligence. 'Tis then
Hereditary tendency, perhaps,
Or constitutional disease appears
To do the fatal work, unless at once
Arrested by the prudent Dentist's skill.

And here, fair readers! let the poet's word
Be credited for once, when he declares
His firm intention never to believe
So base a slander, as that ye esteem
The teeth of little worth. Shall woman wear
Rich jewels, and array herself in robes
Of damask silk; bear pendants in her ears
Of gems and gold, while in her plaited hair
And on her fingers sparkling diamonds shine,
And yet neglect her chain of dental pearls
Worth more than all the jewels in the world!

When Colombrosia, in an evil hour
By accident untoward, lost a tooth,
From underneath her cherry colour'd lip,

And tears of sorrow dew'd her cheeks of snow,
I felt sincere compassion for her grief,
And told her so. And when Philosophine
The victim of disease, and remedies
More hostile still to life, surviv'd to mourn
The loss of half her teeth, I sorrow'd too.
But who will waste his sympathetic tears
In vain compassion for Melisabel,
Who scorn'd advice, and sneer'd at dentistry,
And vow'd she'd sooner sacrifice her teeth
And live on porridge, than subject herself
To inconvenience, labor, or expense
To keep them healthy, clean and beautiful.
Now, they are black with tartar and gangrene,
Crumbled and crumbling, all but two or three
Which still retain their whiteness but to cause
The rest to look more hideous in decay.
The toothache, fiend insatiate, visits her,
From day to day, more constant than her friends,
And when at night she covets balmy rest,
And locks her door to keep intrusion out,
The monster comes, a mighty incubus,
Worse than the nightmare, to her sleepless couch,
And bathes his poison'd arrows in her tears!

But Claroma, more favor'd than the rest,
And ever mindful of the laws of health,
Shall be a pattern for Columbia's fair.
Observe her perfect neatness in attire,
And purity of habit. Not the fawn
Or light gazelle is sweeter, when at break
Of early dawn, upon the mountain's brow,
They snuff the fragrant breezes of the morn.

Her food is simple, and her fav'rite drink
The same pure element that forms the dew,
And gives the diamond all its brilliancy.
Her frequent exercise in open air
Or, mid the duties of domestic life,
Not deemed by her debasing, gives her cheek
The mellow lustre of the velvet peach
Bright crimson'd in the sun:—and then her teeth,
As white as "monumental alabaster,"
Or the pearls which Anthony admir'd
In Cleopatra's bracelet, indicate
The rival pureness of her noble mind.

END OF CANTO SECOND.

THIRD CANTO.

ARGUMENT

TO THE

THIRD CANTO.

Address to the sons of Columbia. — Their happy lot. — Civil and Religious Liberty. — Self Government. — Laws of Happiness. — Business and Occupation. — Intemperance. — Gluttony. — Snuff and Tobacco. — Bathing. — Early Rising. — Feathers and Down. — Covetousness. — Ambition.

THIRD CANTO.

ADDRESSED TO YOUNG GENTLEMEN.

The muse can deem but half her duty done,
While treating thus of health and happiness,
With all their train of causes and effects
And nice dependencies, if she confine
Her wholesome counsel to the fairer sex,
And leave creation's lordlings unadvised!
To you she comes, Columbia's youthful sons!
With warm congratulations. She beholds
Your happy lot by favoring fortune cast
In the gay lap of young America,
Sweet in her virgin bloom; and fairer yet
Contrasted with her ancient sister-world
Beyond the main:—but more enchanting still
As the fair home of heavenly liberty
Bought with her patriots' blood! And here abide
Columbia's virgin daughters, fairy forms!
Composed of Fancy's bright imaginings,
With pure substantial loveliness combined.
With such a birthright, such a country, blest,
And such companions, lo! the future smiles

With hope and joy; for, not the favor'd sons
Of polish'd Greece, or high imperial Rome,
Egypt or Babylon, or that fair realm
Beyond the Indies, nor the arctic tribes
That rode the stormy Baltic, could compare
Their native land with yours. Here science shines
With noon-day glory, on a new born world.
The arts of polish'd life, by ages nursed
And wrought to their perfection, flourish here
Deep in the shadow of the wilderness.
Religion too—the daughter of the skies,
So long an outcast in the eastern world,
Assailed by persecution's hellish fires
And tatter'd and forlorn—walks smiling forth
Beneath her western star, arrayed in white
And garlanded with flowers of paradise!
No faggot here shall burn, no rack distort
Her angel form. The laws of heavenly life
Which she inculcates from her sacred book,
In truths still varying with the varying mind,
Shall be as free for man to profit by
In theory and practice, as the air he breathes
Or heaven's own sun-shine, in this pilgrim land!
For this, stern Freedom holds his native throne
Among your cloud-capt hills; and though mankind
Shall basely tremble at their tyrant's nod,
In all their petty kingdoms, empires, states,
And subject provinces;—this land of yours
As long as round its shores the ocean rolls,
Shall own no king but Liberty and Heaven!

And yet this precious freedom ye enjoy,
This liberty of action and of speech,

Untrammelled by a despot's lawless power,
Can prove a blessing only to the man
Who governs well himself. The slave of vice
Whose brightest virtues are his appetites,
Deserves a master. Whom the passions rule,
Reason forsakes :—and safe self-government
Is fitted only for the reasoning mind.
How vast the scope of man's controlling will
In choosing good in all its varied forms,
Amid the chances of his mortal state !
Yet oft he chooses evil, weeps, and chides
The very fortune which himself procures.
In this, his liberty has been abused
And reason contravened :—for nature's laws
Are laws of happiness, and, when obeyed,
Result in only good ; but, disobeyed,
Induce the hopeless misery of crime.
Go then, Columbia's sons ! to freedom's shrine
Where wisdom sits, the priestess, and imbibe
The spirit of immortal Liberty !
There learn to break the captivating chains,
And shake away the galling manacles
Which Folly binds her votaries withal,
And thus be free indeed :—from habits free
That vilify the soul from low pursuits
And mean propensities—becoming brutes,
Not men. From moral bondage disenthralled,
Ye shall be styled the sons of liberty
Without a blush to think yourselves misnamed.
And then, the laws of nature not transgressed
But wisely followed, shall result in good
Of every name, content, abundance, peace,

Repose by night, activity by day,
Self approbation, health and happiness,
With all the bounties of approving Heaven.
To relish life, and mark its circling years
With useful deeds that bless your fellow men,
Some honest calling choose, or high or low
As suits your education, means and taste,
And follow it with never-tiring zeal.
For, want of occupation—idleness—
Is virtue's deadliest bane, the fruitful spring
Of half the vices that degrade mankind.
Shun indolence as you would shun disgrace,
Or wear the name of loafer—fitly chose
To fix contempt and mark the human drone.
Avoid intemperance in meats and drinks,
But most the deadly poison of the cup.
The drunkard's fate abhor, and cautious shun
The slippery ways that led him on to ruin!
If death ye seek, and must be rid of life
Which hangs a burthen, choose some better mode.
Less anti-christian, and less coward-like,
More dignified and manly than to fall
A staggering victim of the envenom'd still!
Is sorrow the excuse that drunkards urge
To quell loquacious conscience? Many a wife
Can testify in wretchedness and tears,
That, not the bitterness of pinching want,
With all the ills of blighting poverty,
Nor sickness with its feverish melancholy,
Nor death itself that bears our friends away
And locks them in the tomb, is half so sad,
So full of sorrow as the drunkard's home,

Nor yet so full of darkness as his grave.
With stimulating drinks, base gluttony,
Their riotous companion, learn to shun.
Nature requires nutrition, not excess;
For, with excess, repletion comes, and gout,
Dispepsy, appoplexy, pain and death;—
A body ruined and a soul debased.
Obesity which well becomes the ox
Fitted for slaughter, ill becomes a man
Designed for action in the busy world.
Be temperate then in kind and quantity,
And check a roving appetite for food
High-seasoned, and for stronger drinks
Than pure, translucent water from the spring.
Do this—and with the vigor ye acquire
From sober temperance, sally forth at dawn
Among your native hills, to hunt the wolf
Or panther, or to chase the wily fox
Far to his den, or o'er the prairie vast
Ardent pursue the bounding buffalo.
Or better still, if gentler scenes delight,
And rural labor; seize the useful plough,
And Cincinnatus-like attach the steeds
High-fed and mettlesome, or oxen huge
Like Putnam when he left his half-plough'd field
To fight the battles of his native land.
Perchance the sea invites, where gallant ships
Plough deeper furrows, urged by fiercer steeds,
Waves, winds and storms. There on the rolling deck
Plant firm your footsteps, or among the shrouds
Athletick climb, high cradled in the breeze.

But whether on the ocean or the land,
Abroad, at home, in wealth or poverty,
Learned or simple, busy or at ease,
Avoid that popular, seductive weed
Which man alone with one vile worm besides,
Could ever eat:—tobacco—nauseous name!
Too base to feed a starving whelp withal.
Eschew, but chew it not; nor snuff, nor smoke
The foul narcotic. Give it to the dog
That has devoured his master; to the toad
To make his venom of; to spiders, snakes
And vipers, if ye will:—but give to man,
The only being of celestial aim
Beneath the sun, some purer aliment
Less fitted to degrade him to a brute!

Of viler habits, and of deadlier sins
Against the laws supreme of holy Heaven,
It ill becomes the bashful muse to sing,
And yet, with all her virgin modesty,
Her native right she claims to give advice
Where life and health are put in jeopardy
As well as show how both are best sustained.

If well the laws of temperance ye observe,
Already briefly sung; next seek the bath,
Or where the river flows, or ocean's surge
Comes thundering to the shore. With lusty limb
Like Cæsar in the Tyber's rushing flood,
Or Byron struggling with the Hellespont,
Dash through the yielding waves, and from the shore
Fearless advance, with buoyant confidence,
Trusting your sinewy strength to bring you back
When half exhausted, panting to the land.

With practice ye shall learn in time to float
Recumbent on the flood, or, diving deep,
To search for treasures in the caves below.
Not health alone and nice propriety
Demand the swimmer's art, but life perchance
May hang upon his skill; if not his own,
The life of some lov'd friend, some maiden fair,
By accident found struggling with the tide.
See how exultingly he bears her forth
Exhausted, yet half conscious of the grasp
That brings her back to life. With manly pride
He gives her to her friends who weeping come
To bless him, while the blushing maid restored
To all her senses, pays him with a smile
So sweet and full of speechless gratitude,
That strangers to her heart, and jealous prudes
Might well mistake it for the dawn of love.
Let early rising next demand your care,
And early rest. The sluggard's couch forsake
At early day-spring, nor permit the lark
To sing his matin carrol, nor ascend
Gaily to heaven rejoicing, while to sleep
Ye sacrifice the glories of the morn.
Devote an hour to vigorous exercise
In open air, before the morning meal,
Nor think the time mispent that gives the lungs
Fresh ventilation, and that fans the blood
With zephyrs shaking odours from their wings.
Such hours are full of noble sentiment
And soaring thought, and virtuous resolve,
That lift the soul with all its faculties
From earth to heaven, from nature to its God!

Retire betimes to rest, nor spend the hours
Designed for sleep in boist'rous revelry.
The mind and body both require repose
And relaxation from the cares of life.
'Tis thus, in nature's ever perfect plan,
The night returns alternate with the day;
For action this, and that for balmy rest.

But when with sleep ye seek to be refresh'd
And gain augmented vigor from repose,
Choose not the bed of down, nor sink oppress'd
In mound of feverish feathers; but prefer
The firmer mattress, less luxurious,
And more congenial with the laws of health.

Of wealth and fame be not so covetous
As prostrate health and virtue at the shrine
Of Mammon or of glory. Wealth pursue
For all the useful purposes of life,
But not to hoard, for this is its abuse,
And lifts an idol to the throne of heaven.
Court honorable fame, the fair report
And approbation of the wise and good:—
But let ambition never be your god,
Nor barter conscience for an empty name.

THE END.

REMARKS.

The following remarks were furnished at my request, by my esteemed friend, Dr. Charles A. Lee, distinguished alike in the republic of letters and in the walks of his profession. His classic pen, has for many years adorned the pages of our scientific and literary Periodicals; and his merits have been rewarded not only by an extensive practice in this city, and by the esteem of all who know him, but by a recent appointment to the professorship of Materia Medica in the New-York University.

Dr. LEE'S REMARKS.

As a distinct and highly important branch of Medical and Surgical Science, Dentistry has never been properly appreciated.—When we consider, that the teeth form part of the digestive apparatus, the first link in that chain of nutrition, by which the food of man becomes assimilated to his own structure; we shall see that it is a matter of no little moment, that those organs, designed not only for the minute division of the aliment, but also for its intimate mixture with the salivary fluid, should be able to perform their appropriate office to the remotest period of life.—From a long and careful attention to this subject, I am convinced, that the foundation of dispepsia is often laid in *imperfect mastication*, arising either from eating in too hurried a manner, or from defective teeth. The food is not properly prepared for the chemical action of the stomach

upon it, unless it is reduced to a soft pulpy state, both by mechanical trituration, and by being mixed with a certain proportion of fluid; and this fluid is accordingly supplied by means of glands, which are so situated as to be compressed by the action of the muscles which move the jaw, and is forced out as near as possible to the grinding surface of the teeth; and not only this, but it is wisely provided, that the salivary fluid should be secreted in the greatest quantity, at the very time when the food is undergoing mastication. It not only serves to soften the food, but to lubricate the passage to the stomach, and the quantity secreted always bears in health, a strict relation to the food, and the degree of mastication. That this fluid is essential to perfect digestion, we can gather from facts in comparative anatomy. In animals which live on vegetables which require more perfect mastication than animal food, we find the salivary glands of a very large size; much larger indeed than in carnivorous animals; while in *birds*, which do not feed on vegetables, and *reptiles* which do not masticate their food, these glands are either entirely wanting, or of very small size. The same is true also in relation to fishes and the class *Cetacea*.

If these are facts which cannot be disproved, the importance of Dentistry as a distinct branch of science, will appear obvious to all. Unless the teeth are preserved in a sound condition, ill health is almost sure to be the necessary consequence, and a life of pain and suffering will be the penalty for their neglect. Every person, therefore, should consult a scientific dentist regularly, at stated intervals, and every youth should have impressed indelibly on his mind, the important truth, that by the advice and aid of the skilful dentist, *no teeth after the second dentition need ever be lost*—that as in texture, they are the most compact and indestructible part of human organization,—so will they in reality prove to be, if timely submitted to the treatment of the experienced and judicious dentist.

NOTES.

NOTES.

1. It is certainly a remarkable fact that man has contrived by the aid of heat and other chemical agencies, to transform some of the most wholesome, agreeable and nutritive articles of food into powerful and destructive stimulants. Take for examples, Wheat, Barley, Indian Corn, Rye, Apples, Pears, Peaches, Grapes, and even Potatoes, from all of which by fermentation and distillation, alcohol is produced in a variety of forms, and under the most specious disguises. Sugar cane, the first results of which are sugar and molasses, by further processes, produces rum. Here let it not be said, in the present state of chemical science, that alcohol must necessarily be a proper beverage for man, because it results from the most wholesome substances in nature, since it should be well understood by every individual of any education, that decomposition and recomposition, by chemical agencies, of which heat and mixture are the most powerful, produce radical changes in all known forms of matter, an example of which sufficiently striking, will be found in the next note. Nor let it be alleged, that alcohol is found in such abundance in nature as to indicate the propriety of its use by man and the lower animals; for it is a fact incontrovertible that alcohol results from no natural process, but is manufactured exclusively by man the only fire-using animal, by the agencies committed to his

care, as a being capable of science, and endowed with rationality, free alike to good and evil. Nature in none of her processes, affords any argument in favor of the use of intoxicating drinks. Alcohol is not a product of creation, nor the result of any *living* process in nature It is the result of those chemical laws, which operate on *dead matter*, precisely in the same manner as poisonous gasses, or miasmata are produced from decaying vegetables. All vegetable matter which contains sugar, or the saccharine principle, will, under the process of decomposition, or fermentation which is the same thing, produce the poison—*alcohol;* because sugar consists of hydrogen, carbon, and oxygen, and alcohol is composed of the same elements under different combinations, viz : in the proportion of 14,04 –52,17 - 34,79 to the hundred. These elements indeed existed before, but the substance which this new combination forms, did not exist. It is just as different from the sugar, as sickness is from health, death from life, or poison from nutriment. Because fruits and grains are proper articles for the food of man, it no more follows that alcohol which is obtained from them, is also healthy and nutricious, than that the still more volatile gaseous miasmata resulting from their decomposition is salutary. Follow out the principle, and it would lead the advocate of alcohol, to feed on compost out of which vegetables grow, and satisfy his appetite with pulverized diamonds, because this precious stone consists of pure carbon, one of the elements of sugar.

2. The student in chemistry needs not to be informed that Nitric Acid, or *Aqua-Fortis*, is composed of precisely the same elements as the atmosphere which we breathe, mixed in different proportions. Common air consists of oxygen 21 – nitrogen 79 parts — Nitric Acid consists of oxygen 80 — nitrogen 20 parts in the hundred.

To this fact let it be added, that from the peach may be manufactured Prussic Acid, the deadliest poison known, not excepting even Arsenick, or Corrosive Sublimate. From bones Phosphorus may be obtained; from wood ashes, the curious metal potassium, which

inflames even under water: from all forms of matter, the electrick fluid.

3. In addition to the clearly established fact, that water is the natural fluid for quenching thirst, and diluting the solid food of all the animal creation, it has a decided advantage over most other drinks in daily use, inasmuch as it is most palatable and refreshing when taken *cool*. Hot drinks are without question one of the most prolific sources of disease among all man's perversions of the laws of nature. The farmer who has ever fed an animal for months together on food at high temperature, can testify to the diseased condition of the intestinal viscera, and even of the flesh itself when examined in the slaughter-house. In the United States, where more tea, coffee, chocolate and other heated fluids are used daily, and often many times a day, than in any other country perhaps on earth, inflammatory diseases, and especially destruction of the dental organs have become alarmingly common.

If we should admit that no other evil resulted to the animal frame from the daily use of heated drinks, taken into the stomach at a high temperature, than a corresponding elevation of the temperature of some parts of the system, producing perspiration either sensible or insensible to an unnatural extent, this alone would fully account for its baneful influence in the augmentation of inflammatory complaints, resulting from the sudden check of perspiration, which will often if not always, occur after hot potations, whether taken at meals or otherwise. But the influence on the teeth is fatal from another cause; the teeth are liable to crack from sudden elevations or depressions of temperature, and the microscope enables us to detect many such cracked teeth in mouths which have been exposed to great and sudden transitions from heat to cold, or from cold to heat.

In addition to all this, there can be no question that intestinal disease is generated in the abdominal viscera by the quantities of tea, coffee and chocolate, taken heated into the system in our

country, any more than that the disease called *meazles*, in swine and other domestic animals, which have fed for a length of time on heated food, has been produced by an excess of calorick.

Those persons therefore, who persist in using heated fluids instead of cold water, should at least suffer them to cool to near the temperature of the human body; and should be equally cautious not to take into the system too much ice, frozen cream, or water at a low temperature. Besides other injuries to the constitution, the teeth may suffer severely from this dangerous practice.

4. Let it not be supposed that we intend to admit that tea and coffee are injurious to man, as habitual daily drinks, merely because they are generally taken into the system highly heated; for the excess of calorick is but a part of the evil to be deprecated in the use of these articles as daily beverage. Their stimulating properties are unquestionably their most dangerous ones to the human system in general, if not to the teeth in particular.

In order to ascertain the amount of stimulus in either of these substances, it is only necessary to administer them to individuals with whom their use is not familiar; or to suspend the use of them in cases where the system has been for a long time under their influence.

I have known repeated instances in which individuals have been kept awake through a long and tedious night by the action of one or two cups of tea or coffee upon the nervous system—in the case of persons who had long desisted from the use of these articles. But their sensible stimulating influence as felt by all individuals who are accustomed to the free use of tea and coffee, leaves no question in their minds at least, of their possessing properties kindred to those of other stimulants from which perhaps they religiously abstain.

The truth probably is, that these plants would be of great value in the *Materia Medica* of the regular practitioner, if their usefulness as a medicine, were not utterly forestalled, by their constant use as a daily beverage. The same is true of alcohol. It has its uses, and

might possibly assist the physician in countervailing the diseases of mankind, if he did not too frequently find his patients already too much accustomed to its effects.

It is most devoutly to be hoped, that the period is not very remote when mothers will make the important discovery that they can bring up their children without the use of either of these drugs in connection with their aliment. If the medical attendant shall prescribe them at any time, it will be on the same principle that justifies the use of arsenic, calomel, prussic acid, or corrosive sublimate, all of which may be very proper remedies for dangerous maladies, notwithstanding they would be but sorry accompaniments of daily nourishment in states of health.

If the community at large would adopt the Homœphatic doctrine in relation to alcoholic and fermented drinks, tea and coffee, and endeavor to repair the evils which these four classes of bodies have done in the world, by administering infinitessimal doses in place of the large potations now in use, the result would be highly auspicious to the health and happiness of the human race. It will be wise to bear in mind the favorite dogma inculcated by Hahnemar himself, that the smaller the dose the greater the effect; and that simply smelling the cork of a phial in which these substances have been placed in a state of the utmost practicable dilution is the best remedy of all.

5. Nothing short of knowledge of the functions of the skin, and the process of insensible perspiration, can sufficiently impress the mind with the paramount importance of daily purifications. It should be known to all that the skin is provided with millions of pores, or external orifices of excretory vessels, which eject from the system, incredible quantities of effete perspirable matter. This matter thus cast off by perspiration, is not only useless to the animal economy, but absolutely pernicious. It must be freely rejected through the appointed channels, or disease in some form or other must be the consequence.

It is fully as essential to the well-being of man, as to the lower animals, and vegetables, to be freely exposed to the action of water. This is a law of nature from which man withdraws and excludes himself by the shelter which he artificially provides in the form of habitations and apparel; unless he supply the deficiency by frequent ablutions. This should be provided not merely now and then, on gala days, and Sundays, and when commencing a journey, or preparing for matrimony, a ball or a party; but every day in the year, unless sickness prevent, or some uncontrolable circumstance interrupt the habit. The entire surface of the body should be bathed in cool water, and carefully rubbed with a coarse napkin, or flesh brush. Thus the pores of the skin will be kept free from obstruction, the whole system will be refreshed and invigorated, and the healthy process of perspiration will proceed unimpeded.

If men of active and laborious habits who force perspiration by violent exercise, should imagine themselves exempt from the necessity of daily and semi-daily washings for the purpose above alluded to, they surely need the bath for the purpose of cleanliness. The man of sedentary habits, has an additional motive to this wholesome practice, viz: the time and action devoted to this object, are spent in exercise of the most efficient and salutary kind.

The importance of this subject can hardly be urged too zealously upon old and young, inasmuch as perfect and uninterrupted health cannot be reasonably expected in the absence of personal cleanliness in this respect.

6. I have generally remarked, that persons in the habit of wearing large quantities of clothing, are much more liable to colds, than others who dress in fewer garments. By cumbrous clothing, the activity of the body is so much impeded as to prevent that free exercise of the limbs and that unobstructed circulation of the blood, so necessary to health. In the coldest weather, just clothing enough to preserve personal comfort with such excercise as circumstances

permit, is much more desirable than several oppressive and supernumerary garments. This is true both by day and night.

7. Notwithstanding the great temptation which honorable physicians have, to speak in terms of deserved reprobation of many who profess to heal diseases, *quacks licensed and unlicensed*, yet I have generally observed that the just censure which comes from the lips of a professional rival, is construed in almost every instance into jealousy or envy. Let the upright medical practitioner briefly warn his friends and patients of the danger of employing either quacks or their medicines; but he will secure to himself the respect of others more certainly by abstaining from personal abuse and detraction, than by expressing even the honest truth, if it be to the disparagement of a professional competitor.

Professional men, and especially physicians, are very apt to lament the low and degraded state, as they say, of their profession, and sometimes they seem in earnest about adopting measures to increase the respectability and dignity of their calling. Some are for legal enactments against quacks of every kind; some are for raising the standard of acquirements and of preparatory study; some are for rigidly enforcing the code of medical ethicks adopted by the faculty for the due regulation of its members. If all these would learn the efficient and paramount cause of the palmy condition of quackery, and of the low estimate placed upon the highest medical skill, let them seek it in the constant habit in which many of them indulge, of speaking to the disparagement of their professional brethren, of throwing out inuendos to the injury of their medical reputation if not of their moral character. "A house divided against itself" we have the highest authority for saying, "cannot stand." Let physicians cease to be the followers of Ishmael, their hands against every man, and every man's hand against them, and the profession will command greater respect, greater confidence, and, what to some may perhaps be of no less consequence, greater emolument. Let medical men be what they should be, and quackery would die of starvation.

NUMBER OF THE TEETH.

8. The dental arch in man, contains sixteen teeth in each jaw, known by various names resulting from their position, appearance or use, so that a full set consists of thirty-two teeth. This complete arrangement of masticatory organs, is called collectively the *permanent* set, inasmuch as the former set consisting of only twenty teeth, is known as the *temporary* set, lasting only during the period of infancy.

NAMES OF THE TEETH.

The four front teeth in each jaw, are called *incisores*, incisors, or cutting teeth, from their office in dividing the food into small portions in preparation for the general process of mastication, deglution, digestion, chylification and nutrition. Next to these in the permanent set of each jaw, are two canine or dog teeth, vulgarly known as eye teeth and stomach teeth, but classically denominated *cuspidati*, or spear-pointed teeth, because they terminate in a single apex. When one of these is spoken of, it is called a cuspid —or cuspidatus. Next to the cuspidati come four teeth in each jaw, known as bicuspids — *bicuspidati*, from the circumstance of their having two points or prominences instead of one like the cuspidati. Six *molares*, molars or grinders in each jaw complete the set, making thirty-two in all, of which the names, first molar, second molar and wisdom tooth, are applied to each of the three successively at the extremity of each dental arch.

FANGS OF THE TEETH.

The incisors, cuspids and bicuspids have a single root each, although the last named teeth have the elements of two fangs, connected by a web of bone, containing two distinct nervous cavities, the whole having the appearance of one root somewhat flattened by lateral pressure. These teeth in some rare instances exhibit two

distinct fangs. The four upper molars nearest the bicuspids, have in general three separate roots, one interiour and two exteriour to the linear curve of the jaw. The four lower molars nearest the bicuspids, have two roots each very distinctly developed and hence are called *bifurcated*, as the upper molars are said to have *trifurcated* fangs. The wisdom teeth have the elements of three roots generally compressed into one, but in some cases the bifurcated and trifurcated roots appear as in the anterior molars.

ORDER OF PROTRUSION.

The teeth which ordinarily first appear in infancy, are the central incisors of the lower jaw, it being a general law that the teeth come forward into their places in corresponding pairs. The upper incisors next make their appearance, after which, follow the lateral incisors, first below, then above; the first pair of inferiour molars, afterwards the second pair, lastly, the eye teeth, which complete the first set. The second set or permanent teeth succeed after a lapse of six or seven years, in nearly the same order, adding the bicuspids and the wisdom teeth to the former twenty.

IRREGULARITY OF POSITION.

There are two prevailing causes of derangement in the dental arch. The former results from the very common circumstance that the arch is too small to contain the entire arrangement of teeth comprising the set, so that those which make their apearance last are compelled to arrange themselves either without or within the natural line of the arch. The latter cause opperates in those cases where the first set of teeth are not removed in time for the appearance of the second. These latter therefore are forced into a false position, .———The proper remedy will be best known to the well-read and judicious dentist.

SUBSTANCE OF THE TEETH.

The teeth are composed like other parts of the bony structure of the animal machine, of lime in the form of phosphate, carbonate

and fluate, magnesia, soda, gelatine and water. Unlike the other bones, they are provided with an enamel, smooth, hard and transparent, composed of very nearly the same elements as the osseous parts within. This enamel envelops only the crown of the tooth which protrudes into the mouth, and is thus exposed unlike any other bone, to the action of foreign bodies. The osseous portion of a tooth is rather more compact than the other bones, being less cellular, porous or spongy, but in other respects, the resemblance is complete. The enamel of the teeth consists of needle-formed crystals, one end of each crystal resting on the bone beneath, and the other end presented to the bodies acting upon the surface, like the basaltic columns in Fingal's cave, or the Giant's causeway, or like a bundle of arrows in a quiver. The teeth are therefore strongly fortified against mechanical injury, but extremely sensible to chemical action, like all calcarious bodies which readily dissolve in the stronger acids. The menstruum which dissolved the pearl of the Egyptian Queen, would have destroyed her teeth with equal certainty and despatch.

THE NERVOUS CAVITIES.

Every tooth has a central cavity in its crown connected with one or more small tubes corresponding with the number of its roots, for transmitting the nervous filaments, blood vessels and absorbents. The opening of the tubular cavity at the extremity of the root, is called its *foramen*. This class of interior vessels bear some analogy to the marrow of the other bones, and become the source of anguish when exposed to injury or inflammation. Each root is moreover enveloped in a nervous sheath, like the other bones, which is called the *periosteum*, and is the seat of much of the pain of extraction.

THE COLOUR OF THE TEETH.

This circumstance is almost as variable as any other human feature. White is the common ground, pink, blue and yellow the

prevailing tints. Of the origin of this variety of shades, it may be sufficient in the present state of physiological discovery, to say, that several experiments seem to corroborate the theory, that the colour of the teeth, like that of other bones, is greatly modified by the nature and quality of the food employed during the formation of these organs in the pulp or embrio state; or perhaps afterwards during the period of ossification and growth. It has been frequently and fully proved by experiment, that the bones of chickens, pigs and other animals, may be coloured to any depth desired by mixing certain colouring matter with the food. Madder has been often used with complete success.

ARTICULATION OF THE TEETH.

The mode of articulation by which the masticatory organs are firmly attached to the maxillary bones of the animal frame, is called in the language of anatomists, *gumphosis*, and like other contrivances of the animal economy, is subject of merited admiration. The teeth being more liable to fracture and other injury than any of the other bones, are attached to the skeleton in such a manner as to be readily removed in case of accident. For this purpose, nature provides them with a proper support in the form of an envellope embracing the entire root, and firmly attached to the jaw bone during the existence of the tooth, but which disappears by absorption after the root has been removed. This substance is called the *alveolus*, plural, *alveoli*, from its resemblance to the cells of the honey-comb, when the teeth are extracted, and is composed of the same elements as the bones and teeth, being in fact, a temporary bone, coming and going with the teeth of which they are an appendage. The elveoli are so thin and elastic, that they yield to force and pressure in case of extraction, and thus allow the teeth to escape in most cases without any actual fracture of this bony sheath. If however, as is sometimes the case, small portions of the alveolus should adhere to the tooth and be removed with it, no serious evil

is incurred by it, because it must soon be removed by the process of absorption, being of no further use when the tooth has been extracted. In many instances the bifurcated and trifurcated teeth cannot possibly be drawn without greatly bending or cracking the alveolus, yet I have never found it necessary after years of general practice, to bring away with any tooth, a portion of sufficient size to create the slightest apprehension on the part of the patient. With proper instruments and becoming skill and judgement in the operator, there is no necessity of doing the smallest injury either to the maxillary bone or dental alveoli, in removing teeth which have the most divaricating fangs, much less those with a single root.

LOSS OF THE TEETH.

The temporary set are removed by several modes in order to make room for their successors. Absorption of the root is the most usual method which nature employs in removing the teeth of children, in which case the crown being left without support, falls away of itself, or is extracted by the application of very gentle force.

Caries, or mortification of the crown of the tooth, occasioned in some cases by pressure, in other cases by filthy accretions of tartar, and sometimes from causes but little understood, whether constitutional or accidental, destroys the teeth of children as well as those of adults in many instances, leaving the diseased roots in their sockets, sources of constant irritation and disease.

In some cases the teeth are so frail in their original formation, possessing in such instances, a preturnatural whiteness, that they crumble to pieces like calcarious minerals and shells without any assignable cause, except hereditary disease, or constitutional debility.

The teeth are not unfrequently removed by the action of tartar which induces an absorption of the alveolus with the necessary inflammation and destruction of the investing membranes, leaving the teeth without support. This occurs chiefly with the front teeth of the lower jaw, and the molares of the upper, in the vicinity of

the principal excretory ducts through which the tartar enters the mouth in the form of phosphate of lime, being the excess of that element required in the economy of growth and nutrition for the constant re-p roduction and restoration of the waste of hair, bones and nails.

NUTRITION OF THE TEETH.

That the teeth are constantly nourished like every other portion of the animal body, is a fact deduced not only from general analogy, but from the known circumstance that they are supplied with veins, arteries, and absorbents as truly as the eye, the arm or any other organ of the living system. Through the foramen of each root passes a bundle of vessels enveloped in a membraneous sheath, enlarging in the crown of the tooth and forming a centre of vitality, growth and nourishment. The periosteum also which covers the entire root to the edge of the enamel, is another abundant source of growth and nutriment, from which minute vessels plunge into every portion of the living bone.

That the teeth ever increase in size after the first formation of the enamel, is denied by many writers from whose opinion I should unwillingly dissent without a sufficient reason. Notwithstanding the plausible argument drawn from the well known fact, that the small teeth of infants are supplanted by a much larger set in after life to conform to the growth of the other parts; and furthermore, that the enamel is pronounced to be a result of chrystalization and not of organic growth and nutriment, I still must indulge the opinion, that the teeth of all full grown individuals of the human species, are considerably larger than were the same organs at their first protrusion from the gums. I have not indeed compared by actual mechanical admeasurement the teeth of the same individual at these two periods of life, but I have measured with the eye so many times the teeth of different individuals and of the same persons at these two ages that my conviction is not easily to be shaken.

When I am persuaded that the other bones, the nails and the hair are not subject to growth and increment, I shall be better prepared to admit the same dogma respecting the teeth.

RUDIMENTS OF THE TEETH.

The dentals of man, as of other animals, make their appearance at a very early period during the growth of the embrio, in the form of a pulp or soft substance contained in a pear-shaped sack deposited in a small depression of the maxillary bone, in the precise position which the teeth are intended to occupy. For the first or temporary teeth, there are twenty such rudimental sacks, and for the second or permanent set, thirty-two. The deposition of bony matter within these sacks, giving solidity and form to the tooth itself, is called the ossification of the pulp, and is completed near the root even after the first appearance of the crown through the investing gum. The formation of the enamel is a distinct operation from the ossification of the bony portion of the tooth, disclosing to the microscopic investigation of the philosopher one among the thousands of amazing operations of Creative power displayed in the human frame.

A knowledge of these facts should lead parents to be cautious in removing the first set of teeth, lest the pulps of the permanent set should be disturbed. The scientific dentist is the proper judge both of the time and manner of removing the temporary teeth.

DENTAL GANGRENE.

Caries, or more properly, dental gangrene is a decomposition of the bony substance of the teeth, which may be properly designated a mortification. In some instances the decay is rapid and incurable; but in a majority of cases, the gangrene wastes away the tooth by very slow degrees, and may be wholly arrested by the skilful dental

practitioner. The two most common causes of this malady are violent pressure and neglect of cleanliness.

STOPPING THE TEETH.

Various substances have been used for filling the cavities of carious teeth, a few of which only are found to be of permanent value. Among the metals gold and tin are the most useful for this purpose — for reasons easily explained by every Practical Dentist. An Amalgam of mercury and silver when adroitly managed, is of undoubted utility in certain peculiar cases.

CLEANING THE TEETH.

The teeth of infants, children and adults, should be kept perfectly free from all deposites of food, tartar, or other foreign matter which can either decompose or adhere to the surface of these organs. If nurses would invariably wash the mouths of infants and children frequently until they become able to use the brush; and if, in after life, young persons and those of riper years would brush their teeth daily, and if convenient several times a day, as at rising from sleep, after each principal meal, and on retiring to rest, there would be less complaint about bad teeth, and less frequent necessity for the assistance of the dentist. The fact is obvious, that the teeth are more exposed to foul and corrosive deposites than any other part of the animal frame, not merely because the mouth is the receptacle of all the substances taken into the alimentary canal, but because the saliva which is constantly secreted by the salivary glands and thrown into the mouth, contains tartar and other ingredients destructive to the teeth, unless frequently and regularly removed. In every diseased state of the system, too, and in the use of active medicines, these organs are greatly exposed to injury. The only remedy is careful cleansing, not only with water which in general may be sufficient if used with the proper frequency and faithfulness, but with good brushes and dentifrices such as the profession can supply.

TOOTH BRUSHES.

A good stiff brush should be always at hand with which the teeth and gums should be washed and rubbed faithfully, inside and outside, and on the grinding surfaces at least five times a day, as specified above. For children, brushes should be selected of a smaller size suited to their ages. Four new brushes in a year are not too many for an adult; and surely the trifling expense will not be set in comparison with the advantage resulting from their faithful application.

WAXED SILK.

The brush will not always effectually remove unhealthy deposites from between those teeth which are in actual contact; and the best substitute known is floss silk, well known to the ladies as the beautiful product of the silkworm when reeled from the coccoon but not twisted into thread or yarn. This substance as sold in the shops in small skeins, should be kept wound upon a ball for occasional use by all persons who pride themselves on personal neatness. About six inches of the floss should be well waxed and drawn between the teeth until all dark deposites shall be wholly removed.

DENTIFRICE.

I am of opinion, that the following recipe gives as good a powder as is known to the profession.

Armenian Bole,	5 parts or ounces.
Prepared Chalk,	5 parts do
Peruvian Bark,	3 parts do
Gum Myrrh,	1 part or ounce.
Loaf Sugar,	1 part do
Castile Soap,	½ part or ounce.
Cinnamon,	¼ part do
Gum Kino.	¼ part do

Total—16 parts or 1 pound.